



WBS 6.1: Pixels Phase-II Upgrade

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US ATLAS Phase-II L2 Manager's Meeting

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Outline

- WBS Structure.
- Module Assembly/testing plans in the US.
- Bump bonding in the US.



WBS Structure

- Presented at last meeting.
- Some comments on general structure.
- Started to work on details.



US Module Assembly plans (I)

- Detailed US plan needed (US-ATLAS and ATLAS)
- ITk Layout Task Force: workshop in June: increase Pixel Volume: from 4 PL (Pixel Layers) + 5 SL (Strips Layers) to 5 PL + 4 SL.
- (decision to increase Pixel Volume, NOT 5th Layer).
- Potentially very large Pixel Detector:
- (5 layers + high eta) = 18 m² of Si, 12300 Modules !
- Main question: production?
- About 200 modules/week over two years.



US Module Assembly plans (II)

- Meeting with US-groups last week
- 4 Assembly and Testing sites: ANL, LBL, SLAC and UCSC.
- 1 Testing site: UNM.
- Each can process 20 modules/week.
- Question: stave loading in the US (expected)? If 5 layers: 178 barrel staves!
- Same sites for Module and Stave loading.
- Conclusion: US can process 100 modules/week, processing means Module assembly/testing or stave loading.
- Trade more Module assembly for less Stave loading?
- Itk Pixel Module WG meeting next week: we have been asked to present our plans.



Bump Bonding in the US ?

- 4 Bump Bonding facilities (all in EU) have been considered so far.
- Investigating option in the US (lots of advantages).
- CMS worked/works with RTI International (NC-based).
- Meeting with CMS colleagues and RTI Contact this week.